and a catalytic noble metal electrode, such as platinum, on the other. By measurement of the output voltage across the electrodes, both the presence, and the amount, of hydrogen in a gaseous system can be determined.

In the Claims:

Please amend the claims as follows:

1. (Amended) A hydrogen detection device comprising in combination:

(a) a body of phosphate bonded ceramic electrolyte of the general formula $Na(H_3O)_xZr_2Si_xP_{(3-x)}O_{12}$ having a first face spaced apart from a second face;

(b) [a layer of platinum on the first face of the body in electrical contact with the ceramic electrolyte] a catalytic noble metal electrode layer on the first face of the body in electrical contact with the ceramic electrolyte;

(c) a silver ion modified layer on and in the second face of the body;

(d) a silver electrode in contact with the silver ion modified layer; and

(e) conductive leads electrically connected to each of the faces;

whereby the emf generated when the ceramic body is exposed to hydrogen gas is measured.

Cancel claims 2 and 3.

4. (Amended) A hydrogen detection device according to Claim 1 wherein the first and second spaced apart faces on the ceramic body are substantially parallel to each other, and wherein the first and second faces are each substantially flat.

7. (Amended) A hydrogen detection device according to Claim 1 wherein the two conductive leads are attached to each of the [platinum] noble metal layer and the silver electrode by means of a conductive cement.

12. (Amended) A method of detecting hydrogen in a gaseous system which comprises exposing a detection device comprising in combination:

(a) a body of phosphate bonded ceramic electrolyte of the general formula $Na(H_3O)_xZr_2Si_xP_{(3-x)}O_{12}$ having a first face spaced apart from a second face;

(b) a [layer of platinum] catalytic noble metal layer on the first face of the body in electrical contact with the ceramic electrolyte;

(c) a silver ion modified layer on and in the second face of the body;

(d) a silver electrode in contact with the silver ion modified layer; and

(e) conductive leads electrically connected to each of the faces;

to the gaseous system, and measuring the emf generated across the two conductive leads.

13. (Amended) A method of measuring the concentration of hydrogen in a gaseous system which comprises:

(i) exposing a detection device comprising in combination:

(a) a body of ceramic electrolyte of the general formula $Na(H_3O)_xZr_2Si_xP_{(3-x)}O_{12}$ having a first face spaced apart from a second face;

(b) a [layer of platinum] <u>catalytic noble metal layer</u> on the first face of the body in electrical contact with the ceramic electrolyte;

(c) a silver ion modified layer on and in the second face of the body;

(d) a silver electrode in contact with the silver ion modified layer; and

(e) conductive leads electrically connected to each of the faces;

to a plurality of gaseous systems each containing known amounts of hydrogen;

(ii) measuring the emf generated across the conductive leads by exposure to each gaseous system to provide a calibration curve for the device;

(iii) exposing the device to a gaseous system containing an unknown amount of hydrogen;

(iv) measuring the emf generated on exposure to gaseous system in step (iii); and

(v) comparing the emf measured in step (iv) with the calibration curve obtained in step (ii).

Please add claims 14-24.

14. A method according to Claim 12 wherein the noble metal is chosen from the group consisting of platinum and palladium.

15. A method according to Claim 14 wherein the noble metal is platinum.

16. A method according to Claim 14 wherein the noble metal is palladium.

17. A method according to Claim 13 wherein the noble metal is chosen from the group consisting of platinum and palladium.

18. A method according to Claim 17 wherein the noble metal is platinum.

19. A method according to Claim 17 wherein the noble metal is palladium.

20. A hydrogen detection device according to Claim 1 wherein the noble metal is chosen from the group consisting of platinum and palladium.

21. A hydrogen detection device according to Claim 20 wherein the noble metal is platinum.

22. A hydrogen detection device according to Claim 20 wherein the noble metal is palladium.

23. A hydrogen detection device according to Claim 1 wherein the first and second spaced apart faces on the ceramic body are substantially parallel to each other.

24. A hydrogen detection device according to Claim 1 wherein the first and second faces are each substantially flat.

## R E M A R K S

Enclosed herewith is the original Certificate of Correction. The original Letters Patent was submitted with the filing of the application.

It is believed that all informalities noted by the Examiner have now been addressed.